

**PRODUCTION OF GASEOUS CHLORAMINE**

**ABSTRACT OF THE INVENTION**

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The present invention provides a reactor for the gas-phase reaction of commercially available gases in the presence of an inert carrier gas to form product gas. The reactor has a streamlined, compact configuration and  
10 at least one solids collection and removal system downstream of the reactor, where solids are efficiently removed from the product gas stream, leaving high purity product gas. The removal system allows for a simple reactor design, which is easy to clean and operates  
15 continuously over longer periods of time.